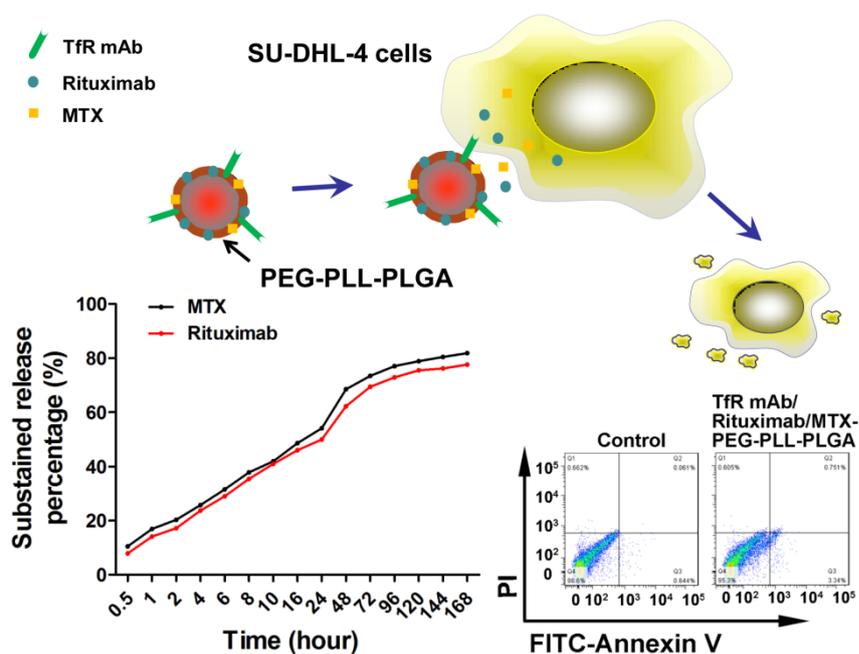


GRAPHICAL ABSTRACT

Title: TfR mAb-cross-linked Rituximab/MTX-PEG-PLL-PLGA drug-loaded nanoparticles enhance anti-cancer action in B lymphocytes

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A precise and efficient carrier for the Rituximab and Methotrexate (MTX) was designed as nanomedicine for anti-cancer action in B lymphocytes. After the synthesis of Rituximab/MTX-PEG-PLL-PLGA, the TfR mAb was subsequently cross-linked to the nanoparticles. The nanoparticle-loaded system can precisely and efficiently transport the Rituximab and MTX drug with long-term sustained release of into SU-DHL-4 cells. The TfR mAb/Rituximab/MTX-PEG-PLL-PLGA nanoparticle increased the cell apoptosis in the SU-DHL-4 cells, resulting in a notable cytotoxicity in B lymphocytes.